

**Translation**

**PATENT COOPERATION TREATY**

**PCT**

**INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY**

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference <b>BR 1459/PCT</b>	<b>FOR FURTHER ACTION</b>	See Form PCT/IPEA/416
International application No. <b>PCT/FR2004/002098</b>	International filing date (day/month/year) <b>06.08.2004</b>	Priority date (day/month/year) <b>08.08.2003</b>
International Patent Classification (IPC) or national classification and IPC <b>C04B22/06</b>		
Applicant <b>CHRYSO S.A.S.</b>		

<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>5</u> sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input checked="" type="checkbox"/> (sent to the applicant and to the International Bureau) a total of <u>8</u> sheets, as follows:</p> <p><input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>	
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the report</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>	

Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/FR2004/002098

Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language \_\_\_\_\_ which is the language of a translation furnished for the purposes of:
- ☐ international search (Rule 12.3 and 23.1(b))
- ☐ publication of the international application (Rule 12.4)
- ☐ international preliminary examination (Rule 55.2 and/or 55.3)
2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:
- ☐ the international application as originally filed/furnished
- ☒ the description:
- pages 4-21 \_\_\_\_\_ as originally filed/furnished
- pages\* 1-3 \_\_\_\_\_ received by this Authority on 13.05.2005 with
- pages\* \_\_\_\_\_ received by this Authority on telefax
- ☒ the claims:
- nos. \_\_\_\_\_ as originally filed/furnished
- nos.\* \_\_\_\_\_ as amended (together with any statement) under Article 19
- nos.\* 1-18 \_\_\_\_\_ received by this Authority on 13.05.2005 with
- nos.\* \_\_\_\_\_ received by this Authority on telefax
- ☒ the drawings:
- sheets 1/1 \_\_\_\_\_ as originally filed/furnished
- sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/FR2004/002098

**Box No. V** Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

## 1. Statement

Novelty (N)	Claims	<u>1-16</u>	YES
	Claims	<u>17, 18</u>	NO
Inventive step (IS)	Claims	<u>1-16</u>	YES
	Claims	<u></u>	NO
Industrial applicability (IA)	Claims	<u>1-18</u>	YES
	Claims	<u></u>	NO

## 2. Citations and explanations (Rule 70.7)

## 1. Reference is made to the following document:

D1: WO 91/15435 A (AALBORG PORTLAND A/S) 17 October 1991.

2. The present application fails to meet the requirements of PCT Article 33(1), since the subject matter of claims 17 and 18 does not comply with the criterion of novelty as defined by PCT Article 33(2).

D1 describes (the references between parentheses apply to said document):

a method wherein a manganese salt in hydroxide form (page 3, lines 13 to 19) in combination with an organic salt such as a naphthalene sulphonate (page 3, lines 20 to 27) is used in a concentrated solution or a powder to reduce the chromium VI content of the cement. Given that naphthalene sulphonate comes within the definition of a water-soluble stabilising agent and that the final concrete has a residual chromium VI content less than 2 ppm, the subject matter of claims 17 and 18 is not novel, despite the physical form in which the reducing agent is added to the cement or to the fresh mixture.

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

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Box No. V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement

3. D1, which is considered to be the prior art closest to the subject matter of claims 1, 15 and 16, describes using a concentrated solution of a manganese salt in combination with a naphthalene sulphonate to reduce the chromium VI content of the cement to a value less than 2 ppm.

Consequently, the subject matter of claims 1, 15 and 16 differs from D1 in that D1 does not describe adjusting to a pH greater than 2 to obtain an aqueous solution. The subject matter of claims 1, 15 and 16 is therefore novel (PCT Article 33(2)).

The problem that the present invention is intended to solve can be considered to be that of preparing a chromium VI reducing agent in a form that is stable in use and, in particular, less corrosive.

The solution to this problem, as proposed in claims 1, 15 and 16 of the present application, is considered to involve an inventive step (PCT Article 33(3)) for the following reasons:

In the treatment of tin, iron and/or manganese salts using an alkaline agent, aqueous suspensions may be prepared; such suspensions, when stabilised by means of a stabilising agent, form reducing agents that are stable, easy to use and less corrosive in comparison to concentrated solutions.

Claims 2 to 14 are dependent on claim 1 and thus also comply, as such, with the PCT requirements of novelty and inventive step.

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Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of: Box I

The amendments added by the letter of 13/05/2005 meet the requirements of Article 34(2)(b). Consequently, the amended claims form the basis for the present report.